

POLE SELECTION TABLE - SINGLE ARM - WITH & WITHOUT LUMINAIRE

| ARM TYPE | D1 | D3 | D5 | D6 | D7 |
|-----------|--------------|--------------|--------------|--------------|----|
| POLE TYPE | S1 & S21 Lum | S2 & S22 Lum | S3 & S23 Lum | S4 & S24 Lum | S6 |

POLE SELECTION TABLE - DOUBLE ARM - WITHOUT LUMINAIRE

| ARM TYPE | D1 - D1 | D3 - D1 | D5 - D2 | D6 - D2 | D4 - D4 | D5 - D4 | D6 - D4 | D5 - D5 | D6 - D5 | D6 - D6 |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| POLE TYPE | S1 | S2 | S3 | S4 | S3 | S4 | S4 | S4 | S4 | S5 |

Arm 1 is listed first

ARM DESIGN TABLE - ALL CASES

| ARM TYPE | ARM LENGTH | MAST ARM | | | | ARM EXTENSION | | | | ARM CONNECTION & WELDS | | |
|----------|------------|------------|------------|------------|------------|---------------|------------|------------|------------|------------------------|------------|------------|
| | | FA/SA (ft) | FB/SB (in) | FC/SC (in) | FD/SD (in) | FE/SE (ft) | FF/SF (in) | FG/SG (in) | FH/SH (in) | HT (in) | FJ/SJ (in) | FK/SK (in) |
| D1 | 36'-0" | 36 | 8.96 | 14 | 0.1793 | | | | | 20 | 25 | 2.5 |
| D2 | 36'-0" | 36 | 8.96 | 14 | 0.1793 | | | | | 30 | 36 | 3 |
| D3 | 46'-0" | 36.3 | 8.92 | 14 | 0.1793 | 11.7 | 13.36 | 15 | 0.313 | 20 | 25 | 2.5 |
| D4 | 46'-0" | 36.3 | 8.92 | 14 | 0.1793 | 11.7 | 13.36 | 15 | 0.313 | 30 | 36 | 3 |
| D5 | 60'-0" | 36 | 7.96 | 13 | 0.1793 | 26 | 12.36 | 16 | 0.375 | 30 | 36 | 3 |
| D6 | 70'-6" | 39.4 | 9.49 | 15 | 0.1793 | 33.1 | 14.37 | 19 | 0.375 | 30 | 36 | 3 |
| D7 | 78'-0" | 40 | 8.44 | 14 | 0.1793 | 40 | 13.40 | 19 | 0.375 | 30 | 34 | 3 |

Arm Camber Angle = 2 degrees

POLE, CONNECTION AND SHAFT DESIGN TABLE - SINGLE & DOUBLE ARM

| POLE TYPE | UA (ft) | UC (in) | UD (in) | UE (in) | UG (ft) | UPRIGHT BASE CONNECTION | | | | | CONNECTION PLATE DATA | | | | | | | | DRILLED SHAFT DATA | | | | | | |
|-----------|---------|---------|---------|---------|---------|-------------------------|---------|---------|---------|---------|-----------------------|------------|------------|------------|------------|------------|------------|------------|--------------------|---------|---------|----|----|----|---------|
| | | | | | | No. Bolts | BA (in) | BB (in) | BC (in) | BF (in) | HT (in) | FJ/SJ (in) | FL/SL (in) | FN/SN (in) | FO/SO (in) | FP/SP (in) | FR/SR (in) | FS/SS (in) | FT/ST (in) | DA (ft) | DB (ft) | RA | RB | RC | RD (in) |
| S1 | 24 | 12.64 | 16 | 0.375 | | 6 | 30 | 2.5 | 1.75 | 36 | 20 | 25 | 0.75 | 0.438 | 15.5 | 1 | 2 | 8 | 0.438 | 12 | 4 | 11 | 14 | 9 | 12 |
| S2 | 24 | 14.64 | 18 | 0.375 | | 6 | 32 | 2.5 | 1.75 | 36 | 20 | 25 | 0.75 | 0.438 | 15.5 | 1 | 2 | 8 | 0.438 | 12 | 4.5 | 11 | 16 | 9 | 12 |
| S3 | 24 | 17.64 | 21 | 0.375 | | 6 | 37 | 2.5 | 2 | 40 | 30 | 36 | 0.75 | 0.438 | 22 | 1.25 | 2.5 | 12.5 | 0.438 | 15 | 4.5 | 11 | 16 | 10 | 8 |
| S4 | 24 | 22.64 | 26 | 0.375 | | 6 | 42 | 2.5 | 2 | 40 | 30 | 36 | 0.75 | 0.438 | 22 | 1.25 | 2 | 12.5 | 0.438 | 17 | 5 | 11 | 18 | 10 | 8 |
| S5 | 24 | 23.64 | 27 | 0.375 | | 6 | 45 | 2.5 | 2.25 | 45 | 30 | 36 | 0.75 | 0.438 | 22 | 1.25 | 2 | 12.5 | 0.438 | 18 | 5 | 11 | 18 | 10 | 8 |
| S6 | 24 | 21.64 | 25 | 0.375 | | 6 | 41 | 2.5 | 2 | 40 | 30 | 34 | 0.75 | 0.5 | 16.5 | 1.25 | 2 | 12.5 | 0.5 | 15 | 5 | 11 | 18 | 10 | 8 |
| S21 Lum | 39 | 10.54 | 16 | 0.375 | 37.5 | 6 | 30 | 2.5 | 1.75 | 40 | 20 | 25 | 0.75 | 0.438 | 11.5 | 1 | 2 | 8 | 0.438 | 12 | 4 | 11 | 14 | 9 | 12 |
| S22 Lum | 39 | 12.54 | 18 | 0.375 | 37.5 | 6 | 32 | 2.5 | 1.75 | 40 | 20 | 25 | 0.75 | 0.438 | 12.5 | 1 | 2 | 8 | 0.438 | 12 | 4.5 | 11 | 16 | 9 | 12 |
| S23 Lum | 39 | 15.54 | 21 | 0.375 | 37.5 | 6 | 37 | 2.5 | 2 | 40 | 30 | 36 | 0.75 | 0.438 | 15 | 1.25 | 2.5 | 12.5 | 0.438 | 14 | 4.5 | 11 | 16 | 10 | 8 |
| S24 Lum | 39 | 20.54 | 26 | 0.375 | 37.5 | 6 | 42 | 2.5 | 2 | 40 | 30 | 36 | 0.75 | 0.438 | 17 | 1.25 | 2 | 12.5 | 0.438 | 15 | 5 | 11 | 18 | 10 | 8 |

LUMINAIRE AND LUMINAIRE CONNECTION

| LA (ft) | LB (ft) | LC (in) | LD (in) | LE | LF (ft) | LG (in) | LH (in) | LJ (in) | LK (in) | LL (deg) | UG (ft) |
|---------|---------|---------|---------|-----|---------|---------|---------|---------|---------|----------|---------|
| 40 | 10 | 3 | 0.125 | 0.5 | 8 | 0.5 | 0.75 | 0.25 | 0.25 | 0 | 37.5 |

- Notes:
 1. Work this Index with Index No. 17745.
 2. Design Wind Speed = 150 mph with Signal Backplates.

"D" MAST ARMS

C:\projects\standards\roadway\17700-s\17743-01.dgn 11:49:32 AM 12/30/2011

C:\projects\standards\roadway\17700-s\17743-02.dgn
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| POLE SELECTION TABLE - SINGLE ARM - WITH & WITHOUT LUMINAIRE | | | | | |
|--|--------------|--------------|--------------|--------------|----|
| ARM TYPE | E1 | E3 | E5 | E6 | E7 |
| POLE TYPE | T1 & T21 Lum | T2 & T22 Lum | T3 & T23 Lum | T4 & T24 Lum | T6 |

| POLE SELECTION TABLE - DOUBLE ARM - WITHOUT LUMINAIRE | | | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| ARM TYPE | E1 - E1 | E3 - E1 | E5 - E2 | E6 - E2 | E4 - E4 | E5 - E4 | E6 - E4 | E5 - E5 | E6 - E5 | E6 - E6 |
| POLE TYPE | T1 | T2 | T3 | T4 | T3 | T4 | T4 | T4 | T4 | T5 |

Arm 1 is listed first

| ARM DESIGN TABLE - ALL CASES | | | | | | | | | | | | |
|------------------------------|------------|------------|------------|------------|------------|---------------|------------|------------|------------|------------------------|------------|------------|
| ARM TYPE | ARM LENGTH | MAST ARM | | | | ARM EXTENSION | | | | ARM CONNECTION & WELDS | | |
| | | FA/SA (ft) | FB/SB (in) | FC/SC (in) | FD/SD (in) | FE/SE (ft) | FF/SF (in) | FG/SG (in) | FH/SH (in) | HT (in) | FJ/SJ (in) | FK/SK (in) |
| E1 | 36'-0" | 36.0 | 5.96 | 11 | 0.25 | | | | | 22 | 23 | 2 |
| E2 | 36'-0" | 36.0 | 5.96 | 11 | 0.25 | | | | | 30 | 32 | 2.75 |
| E3 | 46'-0" | 36.3 | 7.06 | 12.14 | 0.25 | 11.7 | 11.36 | 13 | 0.313 | 22 | 23 | 2 |
| E4 | 46'-0" | 36.3 | 7.06 | 12.14 | 0.25 | 11.7 | 11.36 | 13 | 0.313 | 30 | 32 | 2.75 |
| E5 | 60'-0" | 36.0 | 6.10 | 11.14 | 0.25 | 26 | 10.36 | 14 | 0.375 | 30 | 32 | 2.75 |
| E6 | 70'-6" | 39.4 | 6.63 | 12.15 | 0.25 | 33.1 | 11.37 | 16 | 0.375 | 30 | 32 | 2.75 |
| E7 | 78'-0" | 40.0 | 7.50 | 13.10 | 0.1793 | 40 | 12.40 | 18 | 0.375 | 30 | 32 | 2.5 |

Arm Camber Angle = 2 degrees

| POLE, CONNECTION AND SHAFT DESIGN TABLE - SINGLE & DOUBLE ARM | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------|---------|---------|---------|---------|-------------------------|---------|---------|---------|---------|-----------------------|------------|------------|------------|------------|------------|------------|------------|--------------------|---------|---------|----|----|----|---------|
| POLE TYPE | UA (ft) | UC (in) | UD (in) | UE (in) | UG (ft) | UPRIGHT BASE CONNECTION | | | | | CONNECTION PLATE DATA | | | | | | | | DRILLED SHAFT DATA | | | | | | |
| | | | | | | No. Bolts | BA (in) | BB (in) | BC (in) | BF (in) | HT (in) | FJ/SJ (in) | FL/SL (in) | FN/SN (in) | FO/SO (in) | FP/SP (in) | FR/SR (in) | FS/SS (in) | FT/ST (in) | DA (ft) | DB (ft) | RA | RB | RC | RD (in) |
| T1 | 24 | 10.64 | 14 | 0.375 | | 6 | 26 | 2.5 | 1.5 | 36 | 22 | 23 | 0.5 | 0.375 | 14 | 1 | 2.0 | 9 | 0.375 | 11 | 4 | 11 | 14 | 8 | 12 |
| T2 | 24 | 12.64 | 16 | 0.375 | | 6 | 28 | 2.5 | 1.5 | 36 | 22 | 23 | 0.5 | 0.375 | 14 | 1 | 2.0 | 9 | 0.375 | 12 | 4 | 11 | 14 | 9 | 12 |
| T3 | 24 | 15.64 | 19 | 0.375 | | 6 | 35 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.375 | 19.5 | 1.25 | 2.25 | 12.5 | 0.375 | 12 | 4.5 | 11 | 16 | 9 | 12 |
| T4 | 24 | 18.64 | 22 | 0.5 | | 6 | 38 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.375 | 19.5 | 1.25 | 2.0 | 12.5 | 0.375 | 15 | 4.5 | 11 | 16 | 10 | 8 |
| T5 | 24 | 18.64 | 22 | 0.5 | | 6 | 38 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.375 | 19.5 | 1.25 | 2.0 | 12.5 | 0.375 | 16 | 4.5 | 11 | 16 | 10 | 8 |
| T6 | 24 | 18.64 | 22 | 0.375 | | 6 | 38 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.438 | 15 | 1.25 | 2.0 | 12.5 | 0.438 | 14 | 4.5 | 11 | 16 | 10 | 8 |
| T21 Lum | 39 | 8.54 | 14 | 0.375 | 37.5 | 6 | 26 | 2.5 | 1.5 | 40 | 22 | 23 | 0.5 | 0.375 | 10 | 1 | 2.0 | 9 | 0.375 | 11 | 4 | 11 | 14 | 8 | 12 |
| T22 Lum | 39 | 10.54 | 16 | 0.375 | 37.5 | 6 | 30 | 2.5 | 1.75 | 40 | 22 | 23 | 0.5 | 0.375 | 11 | 1 | 2.0 | 9 | 0.375 | 12 | 4 | 11 | 14 | 9 | 12 |
| T23 Lum | 39 | 13.54 | 19 | 0.375 | 37.5 | 6 | 35 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.375 | 13 | 1.25 | 2.25 | 12.5 | 0.375 | 12 | 4.5 | 11 | 16 | 9 | 12 |
| T24 Lum | 39 | 16.54 | 22 | 0.375 | 37.5 | 6 | 38 | 2.5 | 2 | 40 | 30 | 32 | 0.75 | 0.375 | 15 | 1.25 | 2.0 | 12.5 | 0.375 | 14 | 4.5 | 11 | 16 | 10 | 12 |

| LUMINAIRE AND LUMINAIRE CONNECTION | | | | | | | | | | | |
|------------------------------------|---------|---------|---------|-----|---------|---------|---------|---------|---------|----------|---------|
| LA (ft) | LB (ft) | LC (in) | LD (in) | LE | LF (ft) | LG (in) | LH (in) | LJ (in) | LK (in) | LL (deg) | UG (ft) |
| 40 | 10 | 3 | 0.125 | 0.5 | 8 | 0.5 | 0.75 | 0.25 | 0.25 | 0 | 37.5 |

- Notes:
- Work this Index with Index No. 17745.
 - Design Wind Speed = 150 mph without Signal Backplates.
130 mph with or without Signal Backplates.
110 mph with or without Signal Backplates.

"E" MAST ARMS

| | | | | | |
|---------------|--------------|---|------------------------------|-----------|-----------|
| LAST REVISION | DESCRIPTION: |  FDOT DESIGN STANDARDS FY 2012/2013 | STANDARD MAST ARM ASSEMBLIES | INDEX NO. | SHEET NO. |
| 01/01/12 | | | | 17743 | 2 |